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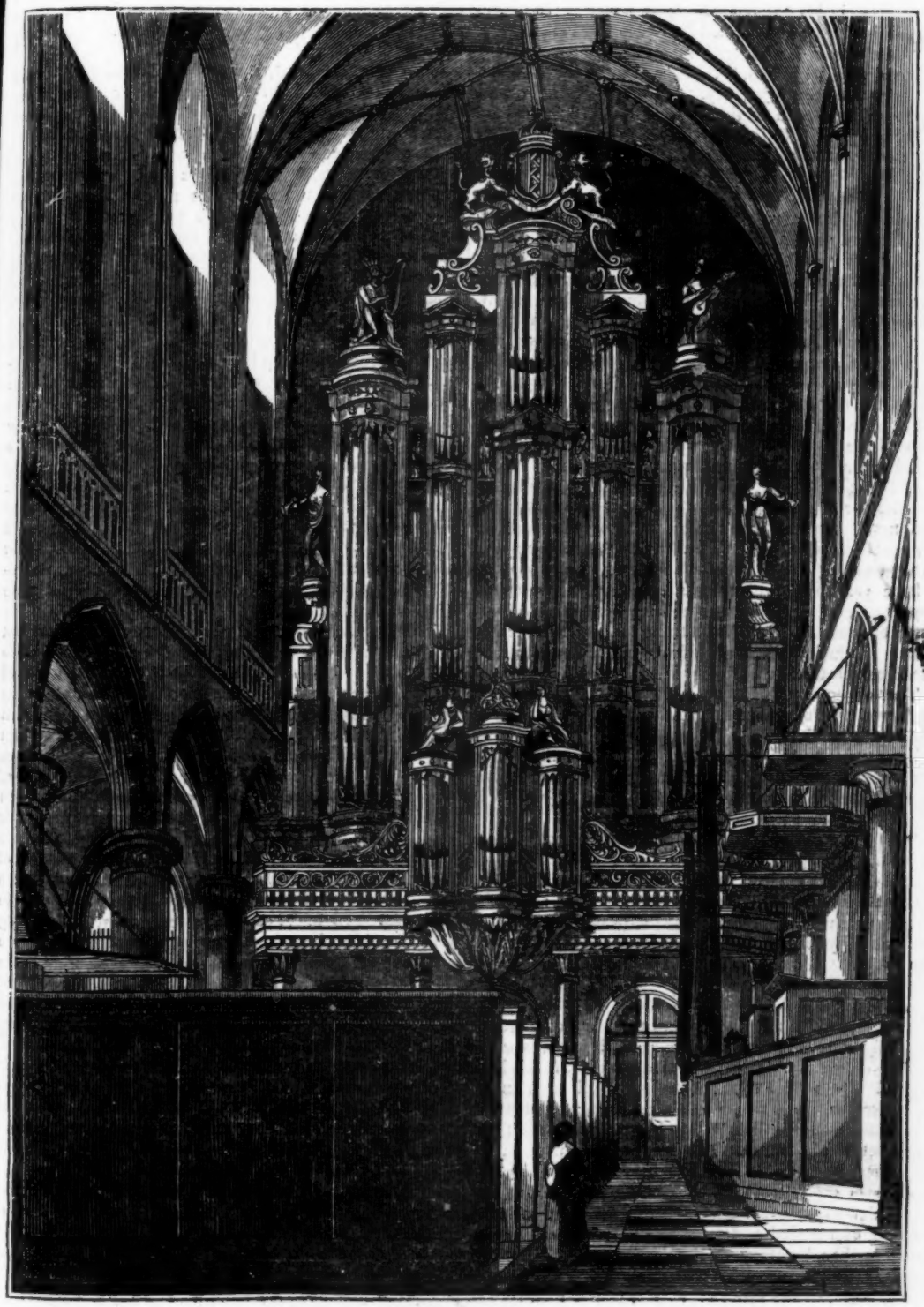
THE HAARLEM ORGAN.



[Haarlem Organ.]

We shall, as soon as possible, give our readers an account of the magnificent organ which has been erected in the Town Hall at Birmingham. In the mean time, the following facts relating to the great organ at Haarlem will not be unacceptable. This organ is said to be not only the largest but the best in Europe—that is, in the world. We shall not enter curiously into the question of its claims in either of these respects, but proceed to lay before our readers, with a little modification, the lively account which Dr. Burney has given of the instrument in his 'Present State of Music in Germany, the Netherlands, and United Provinces.'—1773.

"There were few things," says this most competent judge of musical affairs, "that I was more eager to see, in the course of my journey, than the celebrated organ in the great church of this city. Indeed, it is the *lion* of the place; but to hear this lion roar is attended with more expense than to hear all the lions and tigers in the Tower of London. The fee of the *keeper*, or organist, is settled at half-a-guinea; and that of his assistant keeper, or bellows blower, at half-a-crown. Expectation, when raised very high, is not only apt to surpass probability but possibility. Whether imaginary greatness diminished the real on this occasion I know not, but I was somewhat disappointed on hearing this instrument. In the first place, the person who plays it is not so great a performer as he imagines; and, in the next, though the number of stops amounts to sixty, the variety they afford is by no means equal to what might be expected. As to the *vox humana*, which is so celebrated, it does not at all resemble a human voice, though a very good stop of the kind. But the world is very apt to be imposed upon by names: the instant a common hearer is told that the organist is playing upon a stop that resembles the human voice, he supposes it to be very fine, and never inquires into the propriety of the name, or the exactness of the imitation. However, with respect to my own feelings, I must confess that of all the stops I have yet heard, which have been honoured with the appellation of *vox humana*, no one, in the treble part, has ever reminded me of any thing human so much as of the cracked voice of an old woman of ninety, or, in the lower parts, of Punch singing through a comb."

The organ was built by Müller in the year 1738. It has sixty stops, several of which are not known to our organ-builders, or to be found in any instrument in this country. There are two tremulants; two couplings, or springs of communication; four separations, or valves, to close the wind-chest of a whole set of keys, in case of a *cipher*; and twelve pair of bellows.

"Upon the whole," concludes Dr. Burney, "it is a noble instrument; though I think that of the New Church at Hamburgh is larger, and that of the Old Kerk in Amsterdam better toned. But all these enormous machines seem loaded with useless stops, or such as only contribute to augment noise and to stiffen the touch."

SHAVING.

The comparative advantages and propriety of shaving, and of permitting the beard to grow, it is perhaps not easy to determine. On the side of beards, it has been argued that nature must have bestowed such an appendage for the purpose of being worn; and that, as Tertullian affirmed, it is "blasphemy against the face" to reject it altogether. It is certain also, that a well-kept beard adds greatly to dignity of appearance, and finely sets off other parts of the countenance, and in particular gives great expression to the eyes. A comparison of bearded and beardless portraits is generally much to the advantage of the former. It is difficult to suppose that Leonardo da Vinci, or Cardinal Bembo, or Cranmer, or the Shah of Persia, would look so well without their beards; and in Turkey it is impossible to compare the men who have been shaven, and otherwise Europeanized, with the bearded civilians in their flowing robes, without feeling that the former are, to use an Oriental simile, "plucked pigeons" in comparison. We have heard much of the dignified and stately appearance of the Turks, but such a comparison enables us to perceive that most of their dignity is in their beards and their dresses. Then we must also take into account the trouble of shaving, which made Seume, a German writer, say, in his 'Journal,'—"To-day I threw my powder-apparatus out of the window. When will come the blessed day when I shall send the shaving apparatus after it!"

On the other hand, it may be alleged that, as the beard has always been shaven wherever men became highly civilized, its growth must have been found incompatible with the convenience and refinements of such a state, and would be a serious incumbrance in many delicate acts. Besides, we find that, among all bearded nations, the beard has always been invested with peculiar sacredness, which preserves it from any kind of violation; and as it is the tendency of civilization to eradicate prejudices, this would suffer among the rest, and men would live in continual peril of the practical jokes and rough handling which so conspicuous an appendage would seem almost to invite. Then it may be questioned whether the care which the beard would require to keep it in a decent state, and to prevent it from becoming a receptacle for dust and other impurities, is not fully equal to any that shaving occasions. In point of mere appearance, also, it may be stated that, what the eyes lose by the absence of a beard obtains a full compensation, except in old age, by the greater advantage with which the mouth appears. Upon the whole, speaking from the experience of those Europeans who have worn a beard in other lands, it may be said that the law of this matter should be for every man to shave or not to shave, as his age, circumstances, pursuits, and inclinations might render the most convenient to him.

The practice of shaving probably originated at first from its being found that the beard afforded too good a hold to an enemy in battle. This is the cause assigned for the origin of shaving among the Greeks, about the time of Alexander; and in most countries we find that the practice is first adopted by military men, and that men of pacific and learned pursuits retain their beards much later. The Greeks continued to shave until the time of Justinian, in whose reign long beards became again fashionable, and remained in use until Constantinople was taken by the Turks. The Romans appear to have derived the custom of shaving from the inhabitants of Sicily, who were of Greek origin; for we find that a number of barbers were sent from thence to Rome, in the year 296 B.C.; and the refinement of shaving daily is said to have been first introduced by no less a person than Scipio Africanus. At the expiration of the Republic, beards had become very rare; and historians mention the alarm in which some of the emperors lived lest their barbers should cut their throats. For the sake of concealing the scars on his face, the emperor Hadrian wore a beard, and this, of course, brought that appendage again into use; but the custom did not long survive him, although his two immediate successors wore beards in the character of philosophers. Among the Romans, shaving did not commence immediately on the appearance of the hair; the youth was suffered to acquire a small beard, and the operation of shaving was performed for the first time with a great deal of ceremony. Persons of quality had the operation performed for their sons by persons of greater quality than themselves; and this act rendered such persons the adoptive fathers to the children. The day was a festival: visits of ceremony were paid to the young men, who

received presents from their friends; and the first growth of the beard was solemnly consecrated to some deity—usually to the household gods.

The ancient German nations shaved the beard, except that on the upper lip; and what is expressly stated of one tribe was probably true of the rest—that they allowed no young man to shave or cut his hair until he had killed an enemy in battle. The ancient Goths, Franks, Gauls, and Britons, also wore only mustaches, the hair of which they suffered to grow to a very inconvenient length. The Saxons wore long beards, but, at the introduction of Christianity, the laity began, by degrees, to imitate the clergy, who were shaven; they, however, still retained the hair on the upper lip. The Danes appear to have worn their beards. Sueno, the first Danish chief who invaded this country, was surnamed "Forkbeard." The Normans shaved their beards entirely, and looked upon the appendage with so much distaste, as an indication of misery and distress, that they were the great apostles of shaving wherever they came. Accordingly, they endeavoured to persuade or compel the English to shave the hair of their upper lips. The great majority yielded to the necessity of the case, but there were many who chose rather to leave the country than resign their whiskers. However, beards again had their day. In the fourteenth century they became again fashionable, and continued until the beginning of the seventeenth. At the latter date their dimensions had become much contracted, and they were soon after relinquished, the mustaches only being retained; and at the commencement of the last century the practice of shaving the whole face had become universal. In these latter changes the example of France was followed. In that country, Henry IV. was the last sovereign who wore a beard, and he had a tolerably fine one. He was succeeded by a beardless minor, in compliment to whom the courtiers shaved all their beards except the mustaches. The succession of another minor confirmed the custom, and ultimately the mustaches also disappeared. The Spaniards, more tardily influenced by French example, kept their beards until the French and English were beginning to relinquish even mustaches. Perhaps they would have kept the cherished appendage to this day, but a French prince (Philip V.) mounted the Spanish throne with a shaved chin. The courtiers, with heavy hearts, imitated the prince; and the people, with still heavier hearts, imitated the courtiers. The popular feeling on the subject, however, remains recorded in the proverb, "Since we have lost our beards we have lost our souls."

With respect to beards among ecclesiastics, as the practice has somewhat differed from that of the laity, it requires to be separately noticed. Sometimes the clergy of the Western church were enjoined to wear beards, under an impression that shaving was an effeminate practice, and that a beard well became the gravity of the ecclesiastical character; and at other times shaving was enforced, from an idea that pride was too apt to lurk beneath a venerable beard. It is related that Guillaume Duprat, Bishop of Clermont, who assisted at the Council of Trent, and built the College of the Jesuits at Paris, had the finest beard that was ever seen. It was too fine a beard for a bishop; and the canons of his cathedral, in full chapter assembled, came to the barbarous resolution of shaving him. Accordingly, when next he came to the choir, the dean, the *prevôt*, and the *chantre*, approached with scissors and razors, soap, basin, and warm water. He took to his heels at the sight, and escaped to his castle of Beauregard, about two miles from Clermont, where he fell sick from vexation, and died.

By the statutes of some monasteries, it appears that lay monks were to let their beards grow, but that the priests were to shave. The beards of all that were received into the monasteries were blessed with a great deal of ceremony; and the prayers are still extant which were used in consecrating the beard to heaven when an ecclesiastic was shaven. The ecclesiastics of the Greek Church were great sticklers for beards, and when the rupture between that and the Church of Rome was completed, the latter went more decidedly than it had previously done into the opposite extreme. Nevertheless, the regulations about shaving seem not to have been rigidly enforced on the higher dignitaries of the church, for we frequently find that both cardinals and bishops wore their beards: Cardinal Pole, and Bishop Gardiner, in the reign of Mary I., had remarkably fine ones. The early bishops and fathers of the Protestant Church usually wore their beards; but Martin Luther himself, who had been a monk, is always represented without such an appendage.

It would not be well to leave this subject without observing the remarkable fact that, in most countries where the beard is allowed to grow, the hair of the head is shaven. This is particularly the case in Mohammedan nations, in which, in general, only a small tuft of hair is left on the crown of the head, for the purpose of affording their Prophet a hold in raising them to another world hereafter. The operation of shaving the head is performed by the Oriental barbers with great dexterity, but they are utterly at a loss how to deal with the hair of the head in any other manner. A European will find it difficult, in most Mohammedan towns,—except in the sea-ports of the Mediterranean,—to find a man who will undertake to cut his hair, and if he finds one he is obliged to give him very minute instructions. Such is the force of habit, that the writer of this article, who, in some of its details, speaks from experience, can remember no instance in which a Mohammedan barber, however well apprised of what was required of him, failed to come to his task with all his usual apparatus—his basin, his soap, his strop, and his razors.

MINERAL KINGDOM.—Section XXIII.

Iron.—No. II.

This metal has not been found as a native mineral, in a pure state, except in very small quantities. Some rare specimens of it are met with occasionally in the cabinets of mineralogists, as objects of scientific interest. But huge masses of malleable iron have been found in different parts of the earth, lying upon the surface of the ground, or partially imbedded in it; the most remarkable of which are those which were met with in Siberia and in South America. The Siberian mass is described by Professor Pallas in his 'Travels in different parts of the Russian Empire,' in the year 1772. It was discovered in 1750 by a peasant, on the top of a mountain, in the interior of Asiatic Russia, in the district of Krasnojarsk (lat. 56, long. 92, E.), on the borders of the river Enisséi, quite detached from any other mineral substance at all resembling it, and was looked upon by the Tartars with superstitious fear as having fallen from heaven. A Cossack blacksmith, whose cupidity overcame his religious scruples, with considerable difficulty removed the mass to his village, a distance of thirty versts, or about twenty miles, for the purpose of using it in his forge. It weighed forty-two poods, which is equal to 1512 lbs.; but when Professor Pallas was in the country, a part only of it had been used. The South American mass was found in the jurisdiction of Santiago del Estero, 800 miles north-west of Buenos Ayres, and was much larger, for the weight was estimated as equal to thirteen tons, or 29,120 lbs. All these masses of meteoric iron, as they are called, are totally distinct in composition from any ore of iron found in the bowels of the earth: they have all a great similarity of composition one to another, and contain a

proportion of nickel, a metal of great rarity. There is every reason to believe that they belong to that class of remarkable bodies called meteoric stones, or aërolites, which, from time to time, have fallen upon the earth from the atmosphere. A mass of iron of this description was actually seen to fall from the air at Agram, in Croatia, in 1751, which had the appearance of chains welded together. Further particulars relative to meteoric iron will be found in an article in the 'Penny Cyclopædia,' under the word Aerolites, written by the author of these communications, and to which we refer all those who have not before heard of stones falling from the air, and who may, not unnaturally, feel somewhat incredulous about so extraordinary an event.

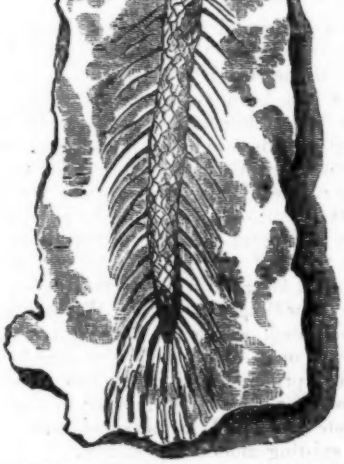
The *ores* of iron are numerous, but many of them form only objects of interest to the scientific mineralogist. There are about eight different kinds of these which occur in sufficient quantities to pay for the expense of erecting furnaces to work them, in order to extract the metal. The ore from which nineteen-twentieths of the iron manufactured in the United Kingdom are obtained, is that kind commonly called argillaceous, or clay-ironstone. It is of various colours,—grey, brown, and bluish-grey; and, to an uninstructed person, would not appear different from an ordinary stone, except on account of its greater weight. It is described in most works on chemistry and mineralogy; but the most detailed accounts we have of the various qualities of this ore, and of the processes for obtaining the metal from it, are those of Mr. Mushet and Dr. Colquhoun. The former, who is one of the most experienced iron-masters in the United Kingdom, published a series of memoirs in the 'Philosophical Magazine,' beginning in 1798, and continuing for several years, which are full of the most valuable practical information, by a person thoroughly conversant with all the science of his subject. Dr. Colquhoun's treatises, which are also extremely valuable, will be found in Brewster's 'Philosophical Journal' for 1827. The iron exists in clay-ironstone in combination with oxygen gas, in that proportion which chemists designate the *protoxide*, and with carbonic acid gas, and mixed with small quantities of earths, carbonaceous matter, and sometimes sulphur. Dr. Colquhoun gives the results of the analysis, or chemical examination, of the composition of nine different varieties, from which it appears that the ironstones vary considerably in quality. One hundred grains of the several ores were found to contain of

Protoxide of Iron	from 35 to 53		per cent.
Carbonic Acid Gas	26	35	,,
Silica (the pure earth of flints)	1	20	,,
Alumina (the pure earth of clay)	¾	8	,,
Lime	2	8½	,,
Magnesia	1¾	6¼	,,

besides minute quantities of carbon, sulphur, and the metal called manganese. The specific gravity of the ores varied from 2·80 to 3·50; distilled water of the same bulk being 1·00.

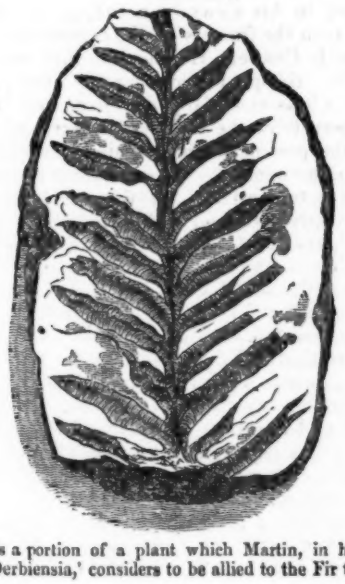
The great deposits of clay ironstone are in the coal-measures; that is, in the strata of shale, clays, sandstones, and slates, which alternate with the layers of coal. It has been well observed by Mr. Conybeare, in his 'Geology of England and Wales,' that "the occurrence of this most useful of metals in immediate connexion with the fuel requisite for its reduction, and the limestone which facilitates that reduction, is an instance of arrangement so happily suited to the purposes of human industry, that it can hardly be considered as recurring unnecessarily to final causes, if we conceive that this distribution of the rude materials of the earth was determined with a view to the convenience of its inhabitants." Clay-ironstone is not confined to the coal-measures, but occurs frequently in some of the superior strata, between the chalk and the coal-measures, and sometimes, though more rarely, in the tertiary sedimentary deposits which lie above the chalk (see the diagram No. 1, in the 'Penny Magazine,' No. 51). The ore is often met with in thin continuous strata, but it seldom happens, when found in the coal-measures, that there is only a single stratum of it; there are usually several strata,—from ten to forty in the same tract of country,—the thickness of them varying from half an inch to sixteen inches; and they generally present, at the same time, differences in their chemical composition. Clay-ironstone occurs frequently in detached nodules, imbedded in the strata of clay or shale, varying in size from that of a bean to five feet in diameter, and half these dimensions in thickness, having, for the most part, a flattened form. They often lie together in one place, at regular distances, forming an almost continuous bed; but more usually the nodules are scattered promiscuously through the clay, but with their longer diameter parallel to the lines of stratification in the coal-measures. In weight they vary from an ounce to upwards of a ton. The size of the nodules most commonly found is about a foot in the longest diameter. They frequently contain shells, and impressions of plants similar to those met with in the shale of the coal-measures. The following specimens are from Chesterfield and Alfreton in Derbyshire:—

Fig. 1.



[Fig. 1. is a plant of the Fern tribe, called *Neuropteris* by fossil botanists.]

Fig. 2.



[Fig. 2 is a portion of a plant which Martin, in his 'Petrifica Derbiensia,' considers to be allied to the Fir tribe.]

All the appearances which clay-ironstone exhibits, whether in layers or in nodules, show that it is not an igneous production, but that it was deposited by water. But the nodules are in no degree analogous to the rounded stones found in many of the strata, which are fragments of rock, the angles of which have been worn off by their being rubbed against each other in running water, like the stones in the bed of a river. The particles of the clay-ironstone must have been suspended in the fluid mass of mud that afterwards hardened into clay or shale, and must have separated from it, and collected together in the spheroidal nodules by some internal chemical action similar to that which takes place in the masses of clay, mixed with ground flints, prepared for making fine pottery and china. When these are allowed to stand unused for some time, it often happens that the particles of the powdered flint separate from the clay into detached, hard, stony nodules. The observation of this fact has thrown considerable light on the probable origin of the nodules of flint in chalk, a subject which was very obscure, and of which no satisfactory theory had previously been proposed.

In our next section we shall proceed to consider the method of obtaining the metal from clay-ironstone.

THE PYRAMID CEMETERY.

The plan of a pyramidal structure, to be used as a cemetery, was laid before the public by Mr. Willson, an architect, in the year 1830. Although its claims to notice have not been more recently urged, we are informed that the architect does not consider the necessity for such a structure as he proposes superseded by the Kensall-Green Cemetery; nor does he doubt that the importance of its principle and the practicability of its execution will be more generally recognised than it appears hitherto to have been. For the neighbourhood of a large town, the principle is apparently a good one; but while we make every allowance for the unwillingness of Mr. Willson to have his design mutilated, we cannot but express our fear that many years must elapse before so grand an application of the principle will be carried into effect; and that the way for it must be prepared by the success of intermediate and humbler measures, which depart less from the existing modes of sepulture.

Mr. Willson appears to have felt very strongly the serious evil of interments in the midst of towns and in churches; but, in his views of a fitting remedy, he went farther than the framers of the cemeteries on the model of Père la Chaise. He thought that any plan recognizing the principle of inclosing plot after plot for burial grounds was essentially defective, and that it would only perpetuate the evils which were incurably attached to the present method, while it would ultimately encroach upon the most valuable garden-grounds and common-lands in the vicinity of the metropolis, greatly to the public disadvantage. Applying his mind, therefore, to the consideration of some plan not liable to such objections, he ultimately formed the design of "a metropolitan cemetery on a scale commensurate with the necessities of the largest city in the world, embracing prospectively the demands of centuries, sufficiently capacious to receive 5,000,000 of the dead, where they may repose in perfect security, without interfering with the comfort, the health, the business, the property, or the pursuits of the living." The following are the outlines of the plan by which it was proposed to effect so great an object; and which is calculated to give 1000 acres for the purposes of interment upon an area of 18 acres only, by means of an ascending structure.

This structure was proposed to be a pyramid faced with granite, and surpassing in magnitude the great pyramid of Egypt. In order to obtain a general idea of what is intended, the architect, in his prospectus, requests his readers to imagine a massive square building gradually diminishing to its apex, the base of which occupies an area as large as Russell Square, and which towers to a height considerably above that of St. Paul's, and exhibits on every side, to its very summit, a vast flight of stairs; the whole faced with square blocks of granite, and surmounted by a plain and appropriate obelisk, having a circular stone staircase, and terminating in an astronomical observatory. The inclosure surrounding the pyramid would contain several acres beyond its base, which might be tastefully laid out for the reception of cenotaphs and monuments. It is considered that the bold, monotonous, and sombre background of the pyramid would present an ample field for the display of such works of the statuary as might be destined to enrich this interesting cemetery, being, by contrast, a fine relief to minute objects of art. The inclosure would also contain a small plain chapel, and a register-office opposite to correspond; four neat dwellings would also be provided for the keeper, the clerk, the sexton, and the superintendent. Against the boundary-wall open arches would be constructed, which would support a terrace-walk along the four sides, with four watch-towers, or covered seats, at the extreme angles. The approach would be through a lofty Egyptian portal. Altogether the completed cemetery would apparently form an object of sepulchral magnificence to which the world has no equal. "This grand mausoleum," says the architect, "will go far towards completing the glory of London. It will rise in majesty over its splendid fanes and lofty towers,—teaching the living to die, and the dying to live for ever." Our own feeling, however, is averse to consider cemeteries with any strong reference to their magnificence or picturesque beauty; and we shall consider that cemetery most entitled to our praise which best accomplishes, not its incidental, but its proper objects. What they are, we have taken former occasions to state; and shall now endeavour to show, by more detailed statements, the construction of a cemetery designed to contain the mortal remains of 5,000,000 of people.

The foundation of the pyramid will consist of an entire floor of solid masonry, which will be surrounded by wide-arched, concealed sewers, to receive the torrents of rain from its surface. The side of the base, at the ground-line, will extend nearly 900 feet, ascending to one diameter in height, which, perspectively, will give the proportion of an equilateral triangle. The walls and arches of the catacombs are to be constructed with hard-burnt, grey, stock bricks, and externally faced with granite or limestone, not less than six inches in thickness. All the avenues and passages are to be paved with rubble-stone, which the refuse of the exterior will supply. The former will have external openings on the four sides at every stage. The entrances or avenues to the cemetery are four (north, south, east, and west), in the centre of the sides, and intersecting each other in the middle of the edifice, where is to be the shaft for general ventilation, having also the position, and apparently the office, of a king-post to the whole structure. As the four principal avenues which thus intersect each other at every stage are wider than the ordinary passages, their side walls will also be of greater thickness than the partition walls of the catacombs,—namely, a yard and a half thick at the base, diminishing every second or third stage upwards to the exterior surface, where they must not be less than two bricks thick to receive the stone facing. The most extensive stages are of course the two below

the surface of the ground, either of which would consist of fifteen quadrangles of double tiers of catacombs, and one single tier towards the exterior. The total number of catacombs exhibited in this single stage is 6,140; and as each catacomb will contain twenty-four coffins, as many as 147,360 may be deposited in this one stage. As this stage is near the base, and the dimensions of the stages contract in the upward progress, this is necessarily the highest amount which any stage will contain. There are ninety-four stages in all, and the uppermost will afford twenty catacombs, or room for 480 coffins.

Having thus stated the horizontal arrangement of the catacombs in the pyramid, we now proceed to view its perpendicular structure. Surrounding the shaft, and also near to the chief avenues, inclined planes of gentle ascent will be constructed, from stage to stage, in lieu of stairs, to facilitate interments, and for the conveyance of materials: those near the sides will be lighted from the exterior. The shaft will be chiefly used for the purpose of raising coffins to the higher catacombs, and to those vaults which are in immediate proximity with it. The walls of the shaft must be radiated, and so constructed as to resist weight and pressure,—being the great abutment of every pier, and of every groined arch throughout the massive edifice; serving the threefold purpose of the main buttress, the general ventilator, and the efficient vomitory, should such a provision be found necessary, for the impure exhalations that may pass by filtration through the walls of the numerous cells. It is also connected with every avenue and passage in the pyramid, and being open from the foundation upwards, and terminating with lifting gratings at every stage, to prevent accidents, it will give ready access to the two stories or stages of catacombs underground, and the ninety-two above ground. These will contain, altogether, 215,296 catacombs, which will afford accommodation for 5,167,104 large-sized coffins, which will be closed up and sealed for ever when interments take place; and stone tablets will be placed on the surface, with inscriptions explanatory of the name, rank, age, and residence of the deceased. The architect compares the appearance of the section to that of a beehive, and considers that the work would possess the compactness of the honeycomb, which it so nearly resembles. It would, at the same time, possess all the elements of duration, "and could only be affected by the convulsions incident to nature; and may be, therefore, said to be almost as immoveable and imperishable as the globe itself. To trace the length of its shadow at sun-rise and at eve, and to toil up its singular passages to the summit, will beguile the hours of the curious, and impress feelings of solemn awe and admiration on every beholder." To the idea which the reader will already have formed of the capacity of this immense mausoleum, we may add that, if 40,000 coffins were deposited in it every year, it would not be full in less than 125 years; and, consequently, that if the number were only 10,000, it would take 500 years to fill it up.

The architect estimates the expense of erecting such a cemetery at two millions and a-half; and if it should be considered impossible to raise such a sum, he suggests that a progressive mode of erection might be adopted, by which the ultimate attainment of the object in view would be quite as well secured. The pyramid might thus either be the accumulating work of ages, or otherwise it might be erected in nineteen or twenty years;—its progress wholly depending on the annual supply of funds; and it might be confidently anticipated that these would rapidly increase in proportion as the practicability of the undertaking became apparent. The immense sum mentioned is allowed, on the first view, to be rather discouraging. But Mr. Willson enters into detailed statements to show that his plan is not less distinguished for its economy than for its practical utility. He assumes the number of burials yearly to be 30,000, and the average cost of each to be 5*l*. These are certainly very low estimates, but they afford an annual expenditure of 150,000*l*., or 15,000,000*l*. in 100 years; while the pyramid, in which more than an equal number of dead might be deposited for a longer period, would cost but 2,500,000*l*., affording to the public a saving of 12,500,000*l*. sterling in one century. It is calculated that the sale of catacombs in anticipation would more than equal the cost of the entire construction; and if the average cost of each interment be estimated at only 3*l*. 10*s*., the proprietors would ultimately realize a profit of 15,000,000*l*. by the concern.

In his 'Prospectus,' and other papers, for which we are indebted to the kindness of the architect, he applies himself to answer the objections which had been made to the plan. We really do not see much in these objections, except in one, which is rather, however, a suggestion, to the effect that two or four pyramids, half the diameter of that to which our statement refers, would be a great saving of expenditure, and therefore more advantageous to the public than that which is proposed. If we understand correctly the dimensions which this pyramid would bear, its height would be about two and a-half times as great as that from the ground to the cross of St Paul's. It would still, therefore, exceed the height of that structure were it reduced one-half, as suggested. But Mr. Willson demonstrates very clearly that the great economy of the pyramid wholly depends upon its magnitude, and that the cost of the great pyramid would not equal that of four of half its diameter, while in its capacity it is equal to eight: which eight, thus brought under one apex, will require no more foundation than the four, and only half the quantity of drainage, and one-fourth of the inclosure; besides the saving which would necessarily result from the construction of one pyramid, and the existence of one establishment, in the place of four.

We have not seen any strong objection to the *principle* of the measure; but it is to be feared that, between the difficulty of raising sufficient funds for its speedy completion on the one hand, and the consideration that it might otherwise take two or three generations to bring it to a completion, on the other, the pyramid is not likely, for several years to come, to be seriously undertaken.

HAWKING.—No. I.

Hawking, or Falconry, is the art of training and flying hawks for the purpose of killing or catching other birds.

Though for many centuries the favourite amusement of the kings, nobles, and gentry, all over Europe, it has now been so long and entirely out of fashion in England that few persons know anything about it, whilst many of the secrets and niceties of the art, that could not be, or were not, preserved in books, have been wholly lost. Hawking, indeed, is one of those pastimes of the olden times that have everywhere retreated before the advance of civilization. Among us, books, pictures, prints, intellectual resources and amusements, the invention of gunpowder and the musket, and the gradual improvements made, from the rude, heavy match-lock, to the light, portable, and sure fowling-piece, have been fatal to it. Shooting gives as much exercise and more excitement, and is a surer way of bagging game than the methods of the falconer; and now-a-days not even the most sporting of our country squires find it necessary, in order to pass their time and amuse themselves, to be continually in the field, or employed in making preparations for it. At a period in which intellectual resources were extremely

rare, and few even of the nobility (whom the sports of hunting, hawking, &c., were long confined) were capable of reading a book, the frequent attention and great length of time required to train a falcon rendered the occupation of great value to the idle rich. It helped them to get through the twenty-four hours, which, when not employed in the less commendable sports of war, seem to have hung heavily on the princes, knights, and barons bold of the middle ages. Those men were much to be pitied in their very vices, for the human mind must be excited and employed by some means, and what means, in those barbarous ages, had they within their reach but fighting, hunting, hawking, and carousing? Where the improvements of modern ages have not reached, the art of falconry and its constant practice still obtain. It is still a common amusement among the Turks in some parts of Asia Minor; among the Persians, the Circassians, the wandering hordes of Tartars and Turkomans; it forms one of the favourite amusements of some of the native princes of India; it is not unknown in the northern provinces of China; and is to be found more or less prevalent in several other barbarous or half-civilized countries.

Hawking appears to have been first introduced into England from the north of Europe during the fourth century. Our Saxon ancestors became passionately fond of the sport, but do not appear to have made great progress in the art of training the birds. In the eighth century, one of our kings of that race caused a letter to be written to Winifred, Archbishop of Mons, begging the dignitary to send him some falcons that had been well trained to kill cranes. The month of October was more particularly devoted to the sport by the Saxons. We were indebted to our fierce invaders, the Danes, for many improvements in falconry. Denmark and, still more, Norway were always celebrated for their breeds of hawks, and the natives of those countries had attained an extraordinary degree of skill in the art of training them. In the eleventh century, when Canute, King of Denmark and Norway, ascended the English throne, the sport became more and more prevalent. We are not aware of what restrictions were imposed under the Saxon or Danish rule, but after the conquest of our island by William of Normandy, none but persons of the highest rank were allowed to keep hawks. Cruel laws, with respect to field-sports, were framed and rigorously executed by the first princes of our Norman dynasty. According to the liberal views of those times, the people were held utterly unworthy of partaking anything, except the air of Heaven, in common with their noble oppressors. The life of a serf was of less value in the eyes of a Norman baron than that of a buck, or a hound, or a hawk; and in those days the mass of what we now call the people were serfs and slaves. As to the keeping of falcons, the great expense attending it put it entirely out of the power of the commonalty, but the prohibitive Norman law was probably meant at first to extend to such of the Saxon landholders as were rich and remained free, but had no rank or nobility according to the Conqueror's estimation. On the contrary, in the days of King John every *freeman* was allowed to have eyries of hawks, sparrow-hawks, falcons, eagles, and herons, *in his own woods*.

The numerous laws referring to hawking alone, enacted during successive reigns, prove the vital importance our ancient rulers attached to the matter.

Hawks, however docile and well trained, were at times apt to fly away from their noble owners and be lost. Edward III. therefore made an express law, according to which any person finding a hawk, tercelet, laner, laneret, or any other species of hawk, was to carry it immediately to the sheriff of the county, who was immediately to cause a proclamation to be made in all the principal towns in the county: the owner of the lost bird, if discovered, was to receive it back from the sheriff on payment of the cost incurred for maintenance,—if not claimed in four months the hawk was to become the property of the finder, if the person who had found it were of proper rank, but if the finder were an ignoble and unqualified person, then the hawk was to become the property of the sheriff, who, however, was to give the poor man something for his trouble. Any attempt of the finder of the hawk to secrete or appropriate it was, like stealing a hawk, to be punished as felony.

The dignitaries of the church, who, in spite of the canonical interdictions of such pastimes, were almost as fond of falconry as the lay-nobility, occasionally launched their spiritual thunder at the heads of hawk-stealers. It is on record that one of Edward III.'s bishops excommunicated certain persons for stealing a hawk that was sitting upon her perch in the cloisters of Bermondsey, in Southwark. It was argued, in support of this severity, that the guilt of sacrilege was added to that of theft, for the bird was purloined during the performance of divine service in the choir;—but what probably aggravated the ecclesiastic's choler was the simple fact that the hawk was his own.

Our old poet Chaucer, who flourished at this time, frequently satirizes the clergy on their rage for the secular pastimes of hunting and hawking. In the 'Canterbury Tales,' he represents a monk as being more learned in riding and hunting than in divinity; and in the 'Ploughman's Tale' he taxes the monks generally with worldly pride, because they ride high-bred horses like knights, having their hawks and their hounds with them. We find precisely the same style of censure and satire in some of the oldest writers in France and Italy, where hawking was just as eagerly followed by the clergy as in England. Ricordano Malespina, a Florentine chronicler of the thirteenth century, talks of a churchman's hunting and hawking like a layman. In the following century, the frequent allusions to hawking in Boccaccio, Villani, and other writers, show how prevalent was the sport in Italy. We also gather from those early authors that the Italians paid enormous prices for their falcons, and that falconry was the favourite pastime of all the princes and nobles of that country. They talk of the falcons of the Emperor Frederic, King of Naples and Sicily; and, later, of Charles of Anjou, who was wont to go hawking attended by all his barons.

In Germany, in Hungary, in Poland, in Russia, the sport was followed with still more ardour. The Russians were in the habit of flying snow-white hawks, of an admirable breed, which were procured from Siberia at an extravagant price. In short, all over Europe, hawking, with hunting, formed the main resource of all idle, ignorant minds, and was long considered as the exclusive attribute of noble blood. The tokens and proofs of nobility or distinction, in different ages and countries, would form a very ludicrous list. During the middle ages, a European showed his rank by having a hawk on his fist, as a Chinese Mandarin, even of our own days, claims the honour due to learning by letting his finger-nails grow to an enormous length. A knight seldom stirred from his house without his falcon on his wrist, and his hound at his heels; and, when his hunting and hawking were over for ever, if he did not die in the field of battle, one of the two animals was generally carved on his monument—the dog at his feet, or the falcon on his hand. At the first resurrection of the art of painting in Italy and Germany, and for more than two centuries after, a portrait was seldom executed without the painter's introducing a falcon, or a gyr-falcon, in it. We have seen some old Italian frescoes in which a long line of knights and ladies were painted, all in the same attitude, with full-front faces, and every

one of them holding a bird—thus looking more fiercely but as monotonously as farmer Flamborough's family picture in the 'Vicar of Wakefield,' in which every individual held an orange. Sebastian Brandt, a German, the author of the Latin poem 'Stultifera Navis,' (the Ship of Fools) complains that, in his time (about the year 1485) the gentry used to take their hawks and hounds to church with them. Hence the devotions of the more religiously inclined were interrupted by the screams and yells of the birds and beasts, and, as Barclay, Brandt's translator, renders it,

"The whole church was troubled by their outrage."

A little before the publication of the honest German's satire, a curious book, generally attributed to Julian Berners, sister of Lord Berners, and prioress of the nunnery of Sopewell, made its appearance in England. It consists of two tracts, one on hawking, and the other on heraldry. We merely mention it here to show the estimation in which falconry was held among us at that time, but we shall refer to the volume, in a future Number, for some curious erudition on the subject. It was written in the reign of Richard III. The sport suffered no decline on the accession of the Tudors. Henry VII. made laws about hawking, as did also Queen Elizabeth; and Henry VIII. practised the gentle craft until he grew too fat and unwieldy. We are told by the old chronicler Hall that, on one occasion, our wife-killing king was well nigh losing his life through his love of the sport. It was the custom not only to cast off the falcon and follow it on horseback, but also, where the ground was broken, intersected by water or marshes, or covered with wood, to pursue the pastime on foot. In the latter case, each sportsman carried a stout pole, to aid him in jumping over rivulets and ditches. Now, one day, as Henry was hawking in this manner, at Hitchen, in Hertfordshire, while vaulting over a ditch, his pole broke, and he fell head downwards into the deep mud, which almost smothered him; and there he would have died but for one John Moody, a serving-man, who, happening to be near, leaped into the ditch and rescued the king. "And so," says old Hall, "God in his goodnesse preserved hym."

During the reign of this gracious monarch, a person of high rank said to Richard Pace, Henry's secretary, "It is enough for the sons of noblemen to wind their horn and carry their hawk fair, and leave study and learning to the meaner people." But those were "the good old times." Queen Elizabeth, who, with all her learning and talent, had no objection to bear-baiting, hunted frequently, and, it appears, occasionally hawked with the ladies of her court. A letter written to her by Sir Walter Raleigh, when she was about sixty years old, is still extant. The flattering knight, who was absent, and rather in disgrace at the time, alludes to her sylvan sports, and compares the old lady and her maids of honour, in their stiff ruffs and fardingales, to—the goddess Diana and her nymphs. There is a portrait of her successor, James I., done when he was a boy, in which that sapient prince is represented with a small hawk on his hand. An amusing resemblance may be detected between the look and expression of the bird and the countenance of James. Later in life, when he wrote his pedantic book of advice to his eldest son Henry, Prince of Wales, after recommending manly exercises, hunting, &c., he adds, "As for hawking I condemn it not, but I must praise it more sparingly, because it neither resembleth the warres so near as hunting doeth, in making a man hardie and skilfully ridden in all grounds, and is more uncertain and subject to mischances; and, which is worst of all, is therethrough an extreme stirrer-up of the passions.'

As popular rights of all sorts became enlarged, and the odious distinctions of the feudal system gradually disappeared, a man could sport his falcons without being a noble. In the seventeenth century, hawking was classed among the amusements of squires and country gentlemen generally. 'The Cornish Comedy,' which was written and played about 1690, contains the following apposite passage:—"What is a gentleman without his recreations? With these we endeavour to pass away the time which would otherwise lie heavily upon our hands. Hawks, hounds, setting-dogs, and cocks, with their appurtenances, are the true marks of a country gentleman." It is, however, worth while to remark how disrespectfully and contemptuously old Burton, in his 'Anatomy of Melancholy,' speaks of those not of "high degree" who follow the sports of the field. "Hunting and hawking," says he, "are honest recreations and fit *some great men*, but are not for every *base, inferior person*, who, whilst they mount their faulconers and dogs, and hunting nags, their wealth runs away with their hounds, and their fortunes fly away with their hawks." To condemn thoughtless extravagance was good and right in the seventeenth century, and is so still, but in our days few moralists would venture on the antithesis of "great men" and "base, inferior persons."

The engraving at the foot of this article represents a falconer carrying two leses of hawks to the field. (Hawks are generally classed in *leses*, and *casts of toure*. A cast meant two hawks, a lese three. These technical words, and many others of less easy explanation, frequently occur in our old writers.)

[Going to the Field. From an Engraving by Reidinger.]

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